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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/067,292 | 02/07/2002 | Kazutaka Hara | Q68448 | 7910 |
| 38834 | 7590 | 04/08/2004 | EXAMINER | |
| WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036 | | | PARKER, KENNETH | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|---|
| Office Action Summary | Application No. 10/067,292 | Applicant(s) HARA ET AL. | |
| | Examiner Kenneth A Parker | Art Unit 2871 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☒ Claim(s) 4 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The polarizer being the backlight is nonsensical, as the disclosed polarizers don't emit light. Additionally, the language contradicts the limitation of the parent claim which indicates that the polarizer is a separate element. It is presumed to mean that the polarizer polarizes the light from the light source, and examination has been done based upon this interpretation.

Regarding claims 7-9, what constitutes a "reduction in light" cannot be determined. As the element is a polarizer, presumably it reduces light by 50% if it is unpolarized. It is possible that applicant is claiming the device compared to some unknown standard (like some other device), in which case the claim is further indefinite as there is no way to determine a comparison to a standard that is known. Additionally, exactly what components are "reducing the light" in accordance with the claims are not clear. For examining purposes, it is presumed that it is claiming light compared to an unknown standard, and that any standard would therefore due and the limitation would therefore be met.

Claim Rejections - 35 USC § 103

Claims 1-3, 5-9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bigelow 4093356 in view of Togashi 4586790, Kashnow 3912369 and Penz et al 4533214.

Bigelow discloses a liquid crystal device with a transfectors 28, $\frac{1}{4}$ waveplate 35 and polarizer 40. It lacks the transfectors being formed on a uniaxially drawn material. Quarter waveplates were conventionally uniaxially drawn to get their birefringent property (to the extent that it is arguably inherent). The technique was used because it was cheap. Therefore it would have been obvious, to one of ordinary skill, to employ a uniaxially drawn material as was conventionally done for the benefit of being cheap. Bigelow still shows the transfectors having a metal layer, the silver layer, on a glass layer not the waveplate. Togashi and Kashnow both disclose a reflector can be done via deposition of a metal on the waveplate (col. 3, lines 20-35), which would save one layer and therefore be lighter and cheaper. Although Togashi and Kashnow are written to a reflectors, a partial reflector was the same thing, using a deposited metal as discussed in both references, however with the partial reflector only deposited part way in thickness (and henceforth having light transmissibility) or having holes to let light through, so the teaching is still relevant. Therefore it would have been obvious, in the device of Bigelow, to employ depositing a metal on the waveplate (either one) for the benefit of lower cost and lighter weight.

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Penz offers a different motivation for employing a uniaxially drawn material as the layer the metal is deposited on, teaching that substrates of such drawn polymers have the advantage of being lighter than glass and stronger and more chemically stable than isotropic polymers. Therefore it would have been obvious to one of ordinary skill, in the device of Bigelow, to employ the drawn polymer of Penz for layer to deposit the silver on for the benefit of being light, strong and stable. Kashow shows that metals can be deposited on polymers, showing that the teaching is relevant.

Regarding the reduction of light, the interpretation given in light of the rejection under 112 was that the comparison was to some unknown standard. However, it was well known that optical parts should be as transmissive as possible and not unnecessary reduce light going through them so as to not waste energy. Therefore it would have been obvious to one of ordinary skill not to unnecessarily reduce the light for the benefit of avoiding unnecessary waste of energy.

The references Togashi and Kashnow can be interpreted as the primary reference, with Bigelow as the secondary reference, with Bigelow providing the motivation to partially reflect the substrates for the benefit of being able to use a backlight combined with the reflected light. Therefore one of ordinary skill would have been motivated to modify the devices of Togashi and Kashnow, to make the substrate partially transmissive for the benefit of enabling the combined use of a backlight.

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Regarding claim 6, what constitutes an element such as the polarizer as part of the backlight or not cannot be determined. Physically, the polarizer is in between the backlight and the LCD, so can be considered part of either one.

Allowable Subject Matter

Claims 4 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claim have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory

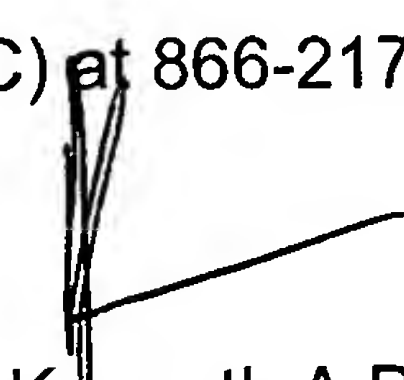
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action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Parker whose telephone number is 571-272-2298. The examiner can normally be reached on M-F 10:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth A Parker
Primary Examiner
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